

IN THE CLAIMS

Please amend the claims as follows:

1. (Cancelled)
2. (Previously presented) A dial access system, comprising:
multiple network access servers; and
a primary interconnect configurable to establish multiple parallel communication links with the network access servers, the multiple parallel links enabling parallel information transfer between multiple combinations of the multiple network access servers at the same time, the primary interconnect including at least one port coupled to a packet switched routing engine connecting different ones of the network access servers to the packet switched routing engine while in parallel connecting together different combinations of other network access servers.
3. (Previously presented) A system according to claim 2 wherein the primary interconnect includes multiple parallel switching circuits configured to connect multiple pairs of the network access servers.
4. (Previously presented) The system according to claim 2 including a secondary interconnect establishing multiple parallel secondary communication links with the network access servers, the multiple parallel secondary links also enabling parallel information transfer between the multiple combination of the multiple access servers at the same time while operating independently of the primary interconnect; and
wherein the secondary interconnect is coupled in parallel with the primary interconnect between the network access servers and the packet switched routing engine and also includes at least one port coupled to the routing engine for connecting different ones of the network access servers to the packet switched network through the packet switched routing engine while in parallel connecting together different other network access servers.

5. (Previously presented) A system according to claim 2 including a buffer for storing packets transferred over the communication links.
6. (Previously presented) A system according to claim 2 wherein the multiple network access servers include separate dial up ports for receiving circuit switched dial-up calls and secondary ports coupled to the primary interconnect.
7. (Previously presented) A system according to claim 2 wherein the primary interconnect includes multiple Local Area Network (LAN) interfaces coupled to the network access servers.
8. (Previously presented) A system according to claim 4 wherein the primary interconnect and secondary interconnect comprise separate Ethernet switches coupled between the multiple network access servers and the packet switched routing engine.
9. (Previously presented) A method for connecting network processing devices together, comprising:
 - coupling the network processing devices together through a primary interconnect to a routing engine;
 - establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices and between the different network processing devices and the routing engine;
 - transferring information between the different pairs of network processing devices and between the different network processing devices and the routing engine through the multiple parallel connections established by the primary interconnect;
 - coupling the network processing devices together through a secondary interconnect to the routing engine, the secondary interconnect operating independently of the primary interconnect;
 - establishing multiple parallel connections in the secondary interconnect between different pairs of the network processing devices and between the different network processing devices and the routing engine; and

transferring information between the different pairs of network processing devices and between the different network processing devices and the routing engine through the multiple parallel connections established by the secondary interconnect.

10. (Previously presented) A method according to claim 9 including establishing at least one of the parallel connections between one of the network processing devices and the routing engine and passing information between different pairs of the network processing devices while another one of the network processing devices in parallel transfers information with the routing engine.

11. (Cancelled)

12. (Previously presented) A method according to claim 9 including:
monitoring call activity data for the network processing devices;
storing the monitored call activity data; and
configuring the primary interconnect according to the stored call activity data.

13. (Previously presented) A method for connecting network processing devices together, comprising:

- coupling the network processing devices together through a primary interconnect;
- establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices;

- transferring information between the different pairs of network processing devices through the multiple parallel connections established by the primary interconnect;

- establishing members of a stack group from the multiple network processing devices;
- establishing multiple links to the stack group members that operate together as a multilink bundle;

- bidding from the stack group members for mastership of the multilink bundle;

- assigning one of the stack group members making a highest bid as a bundle master;

- forwarding data on the multiple links in the bundle to the bundle master; and

- conducting a multilink session with the bundle master.

14. (Previously presented) A method for connecting network processing devices together, comprising:

- coupling the network processing devices together through a primary interconnect;
- establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices;
- transferring information between the different pairs of network processing devices through the multiple parallel connections established by the primary interconnect; establishing multiple links over a circuit switched network with the network processing devices;
- extracting payload packet fragments from the multiple links with the network processing devices;
- transferring the payload packet fragments between the network processing devices through the primary interconnect to a common one of the network processing devices;
- assembling the payload packet fragments into one continuous packet stream with the common one of the network processing devices; and
- sending the continuous packet stream from the common one of the network processing devices through the packet processing device to a packet-switched network.

15. (Previously presented) A system for connecting network processing devices together, comprising:

- means for coupling the network processing devices together through a primary interconnect to a routing engine;
- means for establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices and between the different network processing devices and the routing engine;
- means for transferring information between the different pairs of network processing devices and between the different network processing devices and the routing engine through the multiple parallel connections established by the primary interconnect;
- means for coupling the network processing devices together through a secondary interconnect to the routing engine, the secondary interconnect operating independently of the primary interconnect;

means for establishing multiple parallel connections in the secondary interconnect between different pairs of the network processing devices and between the different network processing devices and the routing engine; and

means for transferring information between the different pairs of network processing devices and between the different network processing devices and the routing engine through the multiple parallel connections established by the secondary interconnect.

16. (Previously presented) A system according to claim 15 including:

means for establishing at least one of the parallel connections between one of the network processing devices and the routing engine; and

means for passing information between different pairs of the network processing devices while another one of the network processing devices transfers information with the routing engine.

17. (Cancelled)

18. (Previously presented) A system according to claim 15 including:

means for monitoring call activity data for the network processing devices;

means for storing the monitored call activity data; and

means for configuring the primary interconnect according to the stored call activity data.

19. (Previously presented) A system for connecting network processing devices together, comprising:

means for coupling the network processing devices together through a primary interconnect;

means for establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices;

means for transferring information between the different pairs of network processing devices over the multiple parallel connections established by the primary interconnect;

means for establishing members of a stack group from the multiple network processing devices;

means for establishing multiple links to the stack group members that operate together as a multilink bundle;

means for bidding from the stack group members for mastership of the multilink bundle;

means for assigning one of the stack group members making a highest bid as a bundle master;

means for forwarding data on the links in the bundle to the bundle master; and

means for conducting the multilink session with the bundle master.

20. (Previously presented) A system for connecting network processing devices together, comprising:

means for coupling the network processing devices together through a primary interconnect;

means for establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices;

means for transferring information between the different pairs of network processing devices over the multiple parallel connections established by the primary interconnect;

means for establishing multiple links over a circuit switched network with the network processing devices;

means for extracting payload packet fragments from the multiple links with the network processing devices;

means for transferring the payload packet fragments between the network processing devices through the primary interconnect to a common one of the network processing devices;

means for assembling the payload packet fragments into one continuous packet stream with the common one of the network processing devices; and

means for sending the continuous packet stream from the common one of the network processing devices through the packet processing device to a packet-switched network.

21. (Currently amended) ~~An article comprising a machine-accessible medium having associated data that, when accessed, results in the following:~~ A computer readable medium having stored thereon computer-executable instructions that, when executed by a processor of a computer system to perform the following:

coupling the network processing devices together through a primary interconnect to a routing engine;

establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices and between the different network processing devices and the routing engine;

transferring information between the different pairs of network processing devices and between the different network processing devices and the routing engine through the multiple parallel connections established by the primary interconnect;

coupling the network processing devices together through a secondary interconnect to the routing engine, the secondary interconnect operating independently of the primary interconnect;

establishing multiple parallel connections in the secondary interconnect between different pairs of the network processing devices and between the different network processing devices and the routing engine; and

transferring information between the different pairs of network processing devices and between the different network processing devices and the routing engine through the multiple parallel connections established by the secondary interconnect.

22. (Currently amended) The ~~machine-accessible~~ computer readable medium of claim 21 including establishing at least one of the parallel connections between one of the network processing devices and the routing engine and passing information between different pairs of the network processing devices while another one of the network processing devices transfers information with the routing engine.

23. (Cancelled)

24. (Currently amended) The ~~machine-accessible~~ computer readable medium of claim 21 including:

monitoring call activity data for the network processing devices;

storing the monitored call activity data; and

configuring the primary interconnect according to the stored call activity data.

25. (Currently amended) ~~An article comprising a machine-accessible medium having associated data that, when accessed, results in the following:~~ A computer readable medium having stored thereon computer-executable instructions that, when executed by a processor of a computer system to perform the following:

- coupling network processing devices together through a primary interconnect;
- establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices;
- transferring information between the different pairs of network processing devices over the multiple parallel connections established by the primary interconnect;
- establishing members of a stack group from the multiple network processing devices;
- establishing multiple links to the stack group members that operate together as a multilink bundle;
- bidding from the stack group members for mastership of the multilink bundle;
- assigning one of the stack group members making a highest bid as a bundle master;
- forwarding data on the links in the bundle to the bundle master; and
- conducting the multilink session with the bundle master.

26. (Currently amended) ~~An article comprising a machine-accessible medium having associated data that, when accessed, results in the following:~~ A computer readable medium having stored thereon computer-executable instructions that, when executed by a processor of a computer system to perform the following:

- coupling network processing devices together through a primary interconnect;
- establishing multiple parallel connections in the primary interconnect between different pairs of the network processing devices;
- transferring information between the different pairs of network processing devices over the multiple parallel connections established by the primary interconnect;
- establishing multiple links over a circuit switched network with the network processing devices;
- extracting payload packet fragments from the multiple links with the network processing devices;

transferring the payload packet fragments between the network processing devices through the primary interconnect to a common one of the network processing devices;

assembling the payload packet fragments into one continuous packet stream with the common one of the network processing devices; and

sending the continuous packet stream from the common one of the network processing devices through the packet processing device to a packet-switched network.

27. (Previously presented) An interconnect device, comprising:

a first interface including a first set of multiple ports for establishing a first set of independent communication links with multiple network processing devices; and

first circuitry configurable to establish a first set of multiple parallel connections between the first set of communication links established with the network processing devices, the first set of multiple parallel connections enabling parallel information transfer between the network processing devices;

a second interface operating independently of the first interface including a second set of multiple ports for establishing a second set of independent communication links with the multiple network processing devices; and

second circuitry operating independently of the first circuitry configurable to establish a second set of multiple parallel connections between the second set of communication links established with the network processing devices, the second set of multiple parallel connections providing parallel information transfer between the network processing devices independently of the first set of multiple parallel connections.

28. (Previously presented) An interconnect according to claim 27 wherein the first and second circuitry includes multiple parallel switching circuits configured to connect multiple pairs of the communication links together in parallel.

29. (Previously presented) An interconnect according to claim 27 wherein the first and second interface each include multiple ports coupled to network access servers and at least one port from both the first and second interface coupled to a routing engine, the first and second

circuitry each connecting at least one of the network access servers to the routing engine while in parallel connecting together combinations of other network access servers.

30. (Previously presented) An interconnect according to claim 27 including a buffer for storing packets transferred over the communication links.

31. (Previously presented) An interconnect according to claim 27 wherein the ports comprise Local Area Network (LAN) ports.